about quality and as yet incompletely dominated by ideas of welfare economics, the rural community is far less affected by change. While milk consumers in the towns are often either not completely convinced of the need for milk processing or at the other extreme will use only imported tinned milk where possible, the producers are generally even less convinced of the need for care in the production of clean milk. Unpasteurised goats' milk is still generally used in those farming households where milk is consumed at all, and understanding of the processes of infection is but slowly growing. Thus, in the field of public health and personal hygiene and medical care, social changes have been rapid, recent and uneven in incidence. Here, as in the economic sector, the mental acceptance of new ideas is not yet complete and is least advanced in the most rural and remote regions.

The examination already made of the demographic situation in the Maltese Islands needs some brief consideration against the background of social attitudes. The consensus of expert opinion is that in developing societies a falling birth rate is the result not of an actual decline in fertility but of family limitation. In most regions such a decline in family size is associated with changed social attitudes, which have become accepted in many countries in which Roman Catholicism is the dominant religion. Pope Pius XII himself condemned irresponsible parenthood and said it is 'a mistake and a departure from moral truth to exalt too highly the generative function even in its right moral setting of married life' (15).

The insularity and historical experience of Malta have preserved there a more rigid and strict application of Catholic rules of conduct, in which, despite the inadequacy of the Islands' resources to provide for the economic welfare of the population, the virtues of the large family are still stressed. Archbishop Gonzi in 1958 reminded an audience of young people that, although large families entailed much sacrifice on the part of the parents, parents should be prepared for a life of sacrifice (16). Father Vella, the founder of the Cana movement has said: 'One of Malta's glories is her large families' (17).

In Malta therefore the weight of the Church tends to discourage the secular social trend towards smaller families, and still makes illegal any provision for family limitation. Where secularism is strongest, in the urban cosmopolis, family size declines most rapidly. In the rural communities, where the precepts of the Church are most conscientiously observed and where the effect of secular socio-economic desires is most restricted, large families are normal and admired.

This regional contrast in social behaviour, when superimposed upon purely demographic variations in rates of population growth, becomes sometimes emphasised and sometimes negated. In the northern third of Malta, inward internal movement as a consequence of 'pioneer' agricultural settlement during and after the mid-nineteenth century produced a 'young' population, high birth rates and rates of natural increase. This region has remained almost entirely rural in social character. The second main region of inward movement of population, the suburban area, has experienced a recent decline in the early high birth rates as a result of the impact of secular ideas.

The urban heart of Malta in Valletta and Floriana by contrast, has been both traditionally a zone of outward movement of population and the district most affected by changes in social attitudes to family propagation. The remaining area, the heart and core of Maltese 'casal' life, illustrates clearly the delicate balance between demographic and religious and secular social influences. From this central area have traditionally gone the migrants to the new towns and the 'new' northern farming areas. The efflux has counteracted the traditionally rural and strongly religious tendency towards large families and a high rate of natural increase. On the southern fringe of this zone however lies the Żurrieq group of 'casals' and villages. From this until recently relatively isolated district, emigration has never been high and, with a survival of traditional rural values, this region has had in the 1950's the consistently highest birth rates - over 30 per 1,000 - of the *Maltese* population.

3: Buxton D-5 (1920-1921) 1922 EZ6 Malta EZ6

The stay of the French in the island was too short to have any effect on the population. A social barrier has been built up between the British and the people of the land, and the general impression gained is that, though there are a certain number of mixed marriages, there cannot, even after three generations of a large, if floating, British element in Valletta, be more than a very thin British strain in the population.

We have shown, in dealing with the history of the island, how extremely difficult it is to account for the wholesale immigration of an Armenoid-like population at any period. We have also shown how, in spite of the continual immigration of people of the Mediterranean stock, the Maltese type (*i.e.* Malta second race, displaying Armenoid characters) appears to have persisted for a long period. It would seem, therefore, a point worthy of further consideration, whether the development of the Maltese along the lines they appear to have followed may not be due to certain definite geographical factors of whose influence we are as yet unaware. It is possible that if we had at our disposal a long unbroken series, instead of larger or smaller series from Neolithic, Mediæval, and modern ossuaries, we should not find such striking contrasts as we do at present. Anthropological data from various parts of the Mediterranean show that there is very often a significant difference between two villages in different valleys of the same mountain range. It is possible that even the few generations which have elapsed between the building of Hal Tarxien and 1921 may be the equivalent, in time, of such a journey in space, and certain big changes may have taken place owing to changing geographical conditions. There can be little doubt that the climate of Malta has changed very much, not only since the first terrace was cut in the Weid Dalam, but even since the formation of the second terrace. We have also suggested that the evidence from Professor Zammit's excavations at Hal Tarxien hints at a change in climate since Neolithic times. The change in the structure of the population may be due, therefore, partly to geographical as well as to historical causes.

Whether or no the development of the Maltese sub-race is due to particular geographical conditions, there can be little doubt that, in Malta at least, the strain is biologically remarkably successful and extremely fertile. In spite of the high infant mortality which has existed in the past, they have continued to increase, and the modern developments of hygiene and the care of infants are likely to make the increase still more rapid. If the overcrowding continues, in a comparatively short time we shall be faced with conditions in the island which would appear to be, biologically speaking, unsatisfactory. Sanitary conditions can be improved, food can be imported, but excessive overcrowding may bring its own remedy, either in disease or in a diminished fertility. The present fertility is quite possibly due to some underlying climatic condition. In spite of lack of water, Malta has long been extremely fertile botanically, and was famed for this in classical times. The Maltese goats, by far the most abundant large mammal of the island apart from

3: Buxton D-5 (1920-1921) 1922 EZ6 Malta EZ6

man, are also unusually fertile, and the females possess remarkably developed udders. Possibly similar causes make both man and the goats fertile. If this is so, emigrants from the island will probably, after a short time, lose their fertility,[1] whilst the only limiting factors on the island itself will be space and the food and water supply.

Summarizing our general conclusions, the race in Malta which is associated with the period of great megalithic buildings—a cultural stage we have termed "Malta Local Neolithic"—appears to be closely akin to the Mediterranean race. This is our "Malta first race." At a later date, possibly towards the end of the Bronze Age, but more probably during the Early Iron Age, Malta was peopled by a race with different characteristics, our "Malta second race." These people are of Armenoid type, but probably have an admixture of Mediterranean blood. Their origin appears to be the Eastern Mediterranean. They may have come to Malta either directly or by way of Carthage. They may have destroyed the previous inhabitants, or they may merely have pursued methods of peaceful penetration. This race has firmly established itself in Malta, and all subsequent introduction of foreign blood has failed to raise the variation. During the course of years certain changes have taken place; there are also certain local variations, but the differences between Malta and Gozo are not greater than the differences between the general population of Malta and at least one, and possibly more, of the more isolated villages.

APPENDIX I.

LITERATURE.

In writing this paper the following authorities have been consulted. Where specific reference is made, the number is given in brackets in the text.

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[1] Of interest in this connection is the fact that there is at present a Maltese colony in Detroit, U.S.A., and it will be instructive to observe whether, amid alien surroundings, the strain is able to perpetuate itself and to retain its fertility.